

**Amendments to the Claims**

This listing of claims will replace all prior versions, and listing, of claims in the application.

**Listing of Claims:**

1. (Canceled)

2. (Canceled)

3. (Canceled)

4. (Canceled)

5. (Canceled)

6. (Canceled)

7. (Currently Amended) An electronic overhear prevention apparatus for safely opening or closing a gas supply passage of a gas range including at least one burner, the electronic overhear prevention apparatus comprising:

- a power supply unit, which supplies direct current (DC) power having a predetermined electromotive force;

- at least one thermal sensor, which senses heat of a corresponding burner and generates a thermoelectromotive force;

- an input button unit, which receives an operating time control signal for each burner from a user;

- at least one magnetic opening/closing unit, which maintains a gas supply passage to a corresponding burner when an electromagnetic force is maintained and closes the gas supply passage when the electromagnetic force is lost;

- a digit display unit, which displays an operating time for each burner in digits; and

- a control circuit unit, which controls an electromagnetic force to be supplied to each magnetic opening/closing unit when a thermoelectromotive force of a thermal sensor corresponding to the magnetic opening/closing unit exceeds a predetermined threshold value, controls the electromagnetic force supplied to the magnetic opening/closing unit to be intercepted when an operating time lapses or when the thermoelectromotive force of the thermal sensor does not exceed a predetermined threshold value, and controls and manages an operating time of each burner, which is generated by adjusting a predetermined reference operating time according to the operating time control signal, as time flows,

wherein when the operating time control signal for a burner is not received from the input button unit, the control circuit unit controls an electromagnetic force, which is supplied to a magnetic opening/closing unit corresponding to the burner, to be intercepted after the predetermined reference operating time lapses.

8. (Original) The electronic overheat prevention apparatus of claim 7, further comprising at least one operation indicator lamp, which indicates whether a corresponding burner is ignited, wherein the control circuit unit controls a electromagnetic force to be supplied to a corresponding magnetic opening/closing unit and simultaneously controls electric power to be supplied to a corresponding operation indicator lamp.

9. (Original) The electronic overheat prevention apparatus of claim 7, further comprising: a gas sensor, which senses ambient gas and generates an electromotive force; and a speaker, which generates an alarm sound, wherein the control circuit unit controls the speaker to generate the alarm sound when an electromotive force from the gas sensor exceeds a predetermined threshold value.

10. (Previously Presented) The electronic overheat prevention apparatus of claim 7, wherein the control circuit unit comprises:

a thermoelectromotive amplifier, which amplifies a thermoelectromotive force received from each thermal sensor and turns on a thermal detection signal when the amplified thermoelectromotive force exceeds a predetermined threshold value;

a clock oscillator, which generates a clock signal;

a microcomputer, which turns on a burner control signal in order to control a electromagnetic force to be supplied to a magnetic opening/closing unit corresponding to the thermal sensor when the thermal detection signal is turned on, gradually decreases the reference operating time or the operating time of each burner according to time information managed by the clock signal of the clock oscillator, and turns off the burner control signal in order to control the electromagnetic force, supplied to the magnetic opening/closing unit, to be intercepted when the reference operating time or the operating time reaches 0 or when the thermal detection signal is turned off; and

a digit formation signal generator, which receives reference operating time data or operating time data of each burner from the microcomputer, generates a digit formation signal corresponding to the received data, and transmits the digit formation signal to the digit display unit.

11. (Currently Amended) A gas range, which generates heat using gas as fuel, comprising:

- a gas supply unit, which supplied gas;

- at least one burner, which generates fire by burning the supplied gas; and

- an electronic overhear prevention apparatus comprising:

- a power supply unit, which supplies direct current (DC) power having a predetermined electromotive force;

- at least one thermal sensor, which senses heat of a corresponding burner and generates a thermoelectromotive force;

- an input button unit, which receives an operating time control signal for each burner from a user;

- at least one magnetic opening/closing unit, which maintains a gas supply passage to a corresponding burner when an electromagnetic force is maintained and closes the gas supply passage when the electromagnetic force is lost;

- a digit display unit, which displays an operating time for each burner in digits;
- and

- a control circuit unit, which controls an electromagnetic force to be supplied to each magnetic opening/closing unit when a thermoelectromotive force of a thermal sensor corresponding to the magnetic opening/closing unit exceeds a predetermined threshold value, controls the electromagnetic force supplied to the magnetic opening/closing unit to be intercepted when an operating time lapses or when the thermoelectromotive force of the thermal sensor does not exceed a predetermined threshold value, and controls and manages an operating time of each burner, which is generated by adjusting a predetermined reference operating time according to the operating time control signal, as time flows,

wherein when the operating time control signal for a burner is not received from the input button unit, the control circuit unit controls an electromagnetic force, which is supplied to a magnetic opening/closing unit corresponding to the burner, to be intercepted after the predetermined reference operating time lapses.

12. (Currently Amended) The gas range of claim 11, wherein the electronic overheat prevention apparatus further comprises at least one operation indicator lamp, which indicates whether a corresponding burner is ignited,

wherein the control circuit unit controls ~~[[a]]~~an electromagnetic force to be supplied to a corresponding magnetic opening/closing unit and simultaneously controls electric power to be supplied to a corresponding operation indicator lamp.

13. (Original) The gas range of claim 11, wherein the electronic overheat prevention apparatus further comprises:

a gas sensor, which senses ambient gas and generates an electromotive force; and  
a speaker, which generates an alarm sound,

wherein the control circuit unit controls the speaker to generate the alarm sound when an electromotive force from the gas sensor exceeds a predetermined threshold value.

14. (Previously Presented) The gas range of claim 11, wherein the control circuit unit comprises:

a thermoelectromotive amplifier, which amplifies a thermoelectromotive force received from each thermal sensor and turns on a thermal detection signal when the amplified thermoelectromotive force exceeds a predetermined threshold value;

a clock oscillator, which generates a clock signal;

a microcomputer, which turns on a burner control signal in order to control a electromagnetic force to be supplied to a magnetic opening/closing unit corresponding to the thermal sensor when the thermal detection signal is turned on, gradually decreases the reference operating time or the operating time of each burner according to time information managed by the clock signal of the clock oscillator, and turns off the burner control signal in order to control the electromagnetic force, supplied to the magnetic opening/closing unit, to be intercepted when the reference operating time or the operating time reaches 0 or when the thermal detection signal is turned off; and

a digit formation signal generator, which receives reference operating time data or operating time data of each burner from the microcomputer, generates a digit formation signal corresponding to the received data, and transmits the digit formation signal to the digit display unit.